

AMENDMENTS TO THE CLAIMS

A complete listing of all claims is presented below.

1. (Cancelled)

2. (Previously Presented) A multi-zonal monofocal ophthalmic lens comprising:

an optic comprising a plurality of zones, including:

an inner zone having a first optical power;

an intermediate zone surrounding the inner zone and having a second optical power

that is different from the first power by a magnitude that is less than about
0.75 Diopter; and

an outer zone surrounding the intermediate zone having a third optical power
different from the second optical power;

the plurality of zones all disposed such that light entering the entire optic from a distant
point source is focused to substantially a single point;

wherein the third optical power is equal to the first optical power.

3-10. (Cancelled)

11. (Previously Presented) A multi-zonal monofocal ophthalmic lens comprising:

an optic comprising a plurality of zones, including:

an inner zone having a first optical power;

an intermediate zone surrounding the inner zone and having a second optical power

that is different from the first power by a magnitude that is less than about
0.75 Diopter; and

an outer zone surrounding the intermediate zone having a third optical power
different from the second optical power;

the plurality of zones all disposed such that light entering the entire optic from a distant
point source is focused to substantially a single point;

wherein the ophthalmic lens is an intraocular lens and includes haptics.

12. (Cancelled)

13. (Previously Presented) A multi-zonal monofocal intraocular lens comprising:
an optic comprising a plurality of zones, including:
an inner zone having a first optical power;
an intermediate zone surrounding the inner zone and having a second optical power
that is different from the first power by a magnitude that is less than about
0.75 Diopter; and
an outer zone surrounding the intermediate zone having a third optical power
different from the second optical power;
the plurality of zones all disposed such that light entering the entire optic from a distant
point source is focused to substantially a single point;
wherein the first surrounding zone compensates for optical aberrations in the image
resulting from implanted intraocular lens decentration of greater than about 0.4 mm.
14. (Previously Presented) The multi-zonal monofocal intraocular lens of claim 13, wherein
the first surrounding zone compensates for optical aberrations in the image resulting from
implanted intraocular lens decentration of greater than about 0.5 mm.
15. (Previously Presented) A multi-zonal monofocal intraocular lens comprising:
an optic comprising a plurality of zones, including:
an inner zone having a first optical power;
an intermediate zone surrounding the inner zone and having a second optical power
that is different from the first power by a magnitude that is less than about
0.75 Diopter; and
an outer zone surrounding the intermediate zone having a third optical power
different from the second optical power;
the plurality of zones all disposed such that light entering the entire optic from a distant
point source is focused to substantially a single point;
wherein the first surrounding zone also compensates for optical aberrations in the image
resulting from implanted intraocular lens tilt of greater than at least about 1 degree.
16. (Original) The multi-zonal monofocal intraocular lens of claim 15, wherein the first
surrounding zone also compensates for optical aberrations in the image resulting from implanted
intraocular lens tilt of greater than at least about 5 degrees.

Appl. No. : 10/705,548
Filed : November 10, 2003

17. (Original) The multi-zonal monofocal intraocular lens of claim 15, wherein the first surrounding zone also compensates for optical aberrations in the image resulting from implanted intraocular lens tilt of greater than at least about 10 degrees.

18-21. (Cancelled)

22. (Previously presented) A method of designing a multi-zonal monofocal ophthalmic lens, comprising:

providing an optical model of the human eye;

providing an optical model of a lens comprising an inner zone, an intermediate zone, an outer zone, and zonal design parameters, the inner zone, the intermediate zone, and the outer zone disposed such that all light entering the inner zone, the intermediate zone, and the outer zone of the monofocal ophthalmic lens from a distant point source is focused to substantially a single point.; and

adjusting the zonal design parameters based on an image output parameter for one or more non-optimal states of the lens.

23. (Original) A method as in claim 22, further including testing the intraocular lens over a plurality of corneal surface variations and dispositions of optical elements in the eye's optical system using tolerance analyzing techniques.

24. (Original) A method as in claim 22, further comprising repeating at least a portion of the method to modify zonal parameters and achieve a better average optical performance.

25-32 (Cancelled)

33. (Currently Amended) A multi-zonal monofocal intraocular lens, comprising:
~~lens comprising:~~

an optic comprising:

an outer periphery;

a first zone having a first optical power; and

a second zone surrounding the first zone and having a second optical power that is reduced from the first power by a magnitude that is less than about 0.75

Diopter;

Appl. No. : 10/705,548
Filed : November 10, 2003

the zones disposed such that light within the outer periphery and entering the entire optic from a distant point source substantially falls within the range of the depth-of-focus of a spherical lens having an equivalent focal length.

34. (Currently Amended) A multi-zonal monofocal intraocular lens, comprising:
~~lens comprising:~~

an optic comprising:

an outer periphery;

a first zone having a first optical power; and

a second zone surrounding the first zone and having a second optical power that is reduced from the first power by a magnitude that is less than about 0.75 Diopter;

the zones disposed such that light from a distant point source entering the entire optic and within the outer periphery is focused to substantially a single point.

35. (Previously Presented) The multi-zonal monofocal intraocular lens of claim 34, further comprising third zone surrounding the second zone and having a third optical power different from the second optical power.

36. (Previously Presented) The multi-zonal monofocal intraocular lens of claim 34, wherein the second power differs from the first power by a magnitude that is less than or equal to about 0.65 Diopter.

37. (Previously Presented) The multi-zonal monofocal intraocular lens of claim 34, wherein the first zone comprises a spherical surface and the second zone comprises an aspherical surface.

38. (Previously Presented) A multi-zonal monofocal intraocular lens; comprising:

an optic comprising:

an optical axis and an outer periphery;

an inner zone overlapping the optical axis for producing an image when the intraocular lens is centered on the optical axis of the human eye; and

a first surrounding zone concentric about the inner zone and adapted to compensate for optical aberrations in the image resulting from implanted intraocular lens decentration of greater than at least about 0.1 mm;

Appl. No. : 10/705,548
Filed : November 10, 2003

the inner zone and the first surrounding zone disposed such that light from a distant point source entering the entire optic and within the outer periphery is focused to substantially a single point.

39. (Previously Presented) The multi-zonal monofocal intraocular lens of claim 38, wherein the inner zone comprises a spherical surface and the first surrounding zone comprises an aspherical surface.

40. (Currently Amended) The multi-zonal monofocal ophthalmic lens of claim 38, wherein the ~~intermediate~~ first surrounding zone has an optical power that is reduced from an optical power of the inner zone.

41. (New) The multi-zonal monofocal intraocular lens of claim 40, wherein the reduction in optical power is less than or equal to about 0.65 Diopter.

42. (New) The multi-zonal monofocal intraocular lens of claim 40, further comprising a second surrounding zone concentric about the first surrounding zone, the second surrounding zone having an optical power different from the optical power of the first surrounding zone.

43. (New) The multi-zonal monofocal intraocular lens of claim 33, wherein the second power differs from the first power by a magnitude that is less than or equal to about 0.65 Diopter.

44. (New) The multi-zonal monofocal intraocular lens of claim 33, wherein the first zone comprises a spherical surface and the second zone comprises an aspherical surface.

45. (New) The multi-zonal monofocal intraocular lens of claim 33, further comprising third zone surrounding the second zone and having a third optical power different from the second optical power.